

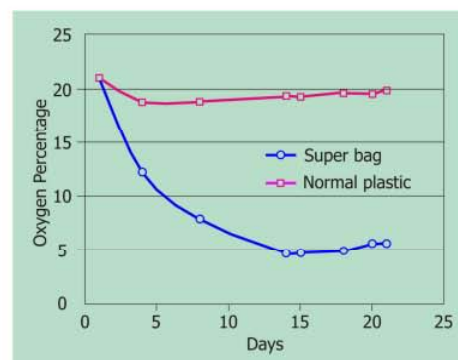
IRRI SUPER BAGS

Introduction

The IRRI super bag is a farmer friendly 50kg storage bag that allows cereal grains to be safely stored for extended periods. The super bag fits as a liner inside the existing woven polypropylene or jute storage bags presently used by farmers. Studies using rice have shown that by using the super bag, farmers are able to control grain moisture levels, maintain seed germination and viability for a much longer period, control grain pests without using chemicals and maintain grain quality for a longer period.

How does it work?

Sealing the grain inside the super bag stops the uptake of moisture and oxygen from the surrounding air and protects the grain from pests and disease. Respiration by the grain and the insects trapped inside the storage system quickly reduce the inter-granular oxygen levels from 21% to less than 5%. Studies have shown that insect numbers are reduced to less than 1 insect/kg of grain without using insecticides and often within 10 days of sealing. Longer term studies have shown that the life of seed extended from 6 months to 12 months and head rice yields improved by 10%. The system also gives protection from birds.



Material

The bags are made from a tough, transparent multi-layer polyethylene material which incorporates a gas barrier that restricts oxygen and water vapor movement. The bags have a wall thickness of 0.078mm and a material weight of 50gm/m². The usable temperature range is from 95°C to minus 18°C. The bags are sealed by twisting the top closed and securing with tape, string or rubber bands, or rolling and clamping or by heat sealing. While the bags have relatively high puncture and tensile strength it is recommended that they are placed inside existing plastic or jute bags to give added physical protection. When full the bags are easily transported, in a similar manner as conventional jute or polypropylene bags.



Other uses

The bags can also be used for storing brown rice and rice meal as well as for other crops such as corn, ground nuts, pulses, sesame and coffee.

Cost

The bags presently cost US \$1 per bag and are reusable if not punctured.

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